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CLAIMS

1. A retractable column comprising:

at least two section chains arranged in an adjacent manner, each section chain having a plurality of sections pivotally connected to each other; and

an at least one chain connection member extending in an outward direction from each section wherein the chain connection members further comprise a surface which slopes toward a point and whereby the chain connection members couple to one another to link each section chain to the adjacent section chain in such a manner as to form a rigid column as the section chains are raised in an operably position.

2. The apparatus of claim 1 wherein the chain connection member further comprises an elongated shaft and a distal hook portion wherein the surface of the chain connection member that converges towards a point is represented by the distal hook portion.

3. The apparatus of claim 2 wherein each section comprises a first chain connection member extending in a substantially outward direction from the section and a second chain connection member extending in a substantially outward direction from the section and wherein a plane running through the hook of the second chain connection member is set at an angle to the elongated shaft.

4. The apparatus of claim 3 wherein the elongated shaft of the chain connection member has a shoulder portion wherein the shoulder portion prevents twisting of the shaft in relation to its connection to the section.

5. The apparatus of claim 1 further comprising:

11. The apparatus of claim 1 wherein the guide tower further comprises an at least one tongue, the tongues movably connected to an at least one post by an at least one reaction ring whereby the guide tower can move in an X, Y horizontal plane.

12. A retractable column that can be stored on a take up mechanism, the column further comprising:

an at least one section chain, each section chain comprising a plurality of sections pivotally connected in a line, the section chains being attached in such a manner that they can be rolled up on the take mechanism in a compact fashion and wherein each section is layered upon previous sections;

a first connection member operably attached to each section wherein the first connection member extends in a horizontal manner from the section; and

a second connection member operably attached to each section wherein the second connection member extends in an off-set manner from the section, wherein the connection members are curved and wherein when the section chains are extended from the take up mechanism and into a corresponding position the section chains operably couple by attachment of the sequential attachment of first connection members to second connection members.

13. The apparatus of claim 12 further comprising a kicker, the kicker operably attached to the crossbar of each section of the section chain whereby when the section is taken up by the take up mechanism, the kicker shunts the section into a properly seated position relative to the section underneath it on the take up mechanism.

14. The apparatus of claim 13 further comprising a drive mechanism operably attached to the section chains whereby actuation of the drive mechanism raises the section chains into position

whereby the interlocking engagement of the first and second connection members to form the column.

15. The apparatus of claim 14 further comprising:

a guide tower operably positioned to the two section chains wherein the guide tower engage the sections and helps to guide the first and second connection members into coupled engagement; and

an at least one guide roller operably connected to the guide tower and operably interacting with the section chains whereby the guide rollers engage the sections and helps to guide the first and second connection members into coupled engagement.

16. The apparatus of claim 15 further comprising an at least one shim, the shims operably attached to the guide tower whereby the shims engage the sections and helps to guide the first and second connection members into coupled engagement.

17. The apparatus of claim 16 further comprising an at least one interior roller, the interior rollers operably positioned on the guide tower whereby the interior rollers engage the sections and helps to guide the first and second connection members into coupled engagement.

18. The apparatus of claim 15 further comprising:

a gear rack fixedly connected to each section of the section chain, the gear rack affixed an extruded T-slot to which fasteners are attached through the gear rack and into the section whereby the gear rack is positioned to engage a drive mechanism and an at least one guide roller; and

an at least one key inserted into the gear rack and the section of the section chain whereby the gear rack is affixedly connected to the section of the section chain.

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a motor in operably connection with each section chain and operably affixed to the guide tower, the motor effectuating the raising and lowering of each section chain; and

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an at least one reaction ring operably attached to the guide tower and connected to an at least one post whereby the guide tower can move in an X, Y horizontal direction.

24. A method for erecting a retractable tower, the method comprising:

providing adjacent section chains, each chain further comprising a series of pivotally connected sections;

coupling the adjacent sections of adjacent section chains by linking corresponding mating hooks from each section chain; and,

lifting the coupled section chains in a vertical manner as the adjacent section chains are coupled thereby forming each section chain into the face of a tower.

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